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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PEREZ DAPLE, AARON C

ART UNIT PAPER NUMBER

2154

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/814,071

Applicant(s)

SUGIMOTO ET AL.

Examiner

Aaron C Perez-Daple

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This Action is in response to RCE filed 8/3/04, which has been fully considered.
2. Amended claims 1-14 are presented for examination.
3. This Action is non-Final.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claim 14** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner is unable to find reference to the claimed limitation recited in line 6, "updating a related second schedule responsive to the base time name," in the original disclosure. Applicant is respectfully requested to point out the portions of the disclosure which provide support for this limitation in the claim.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1, 2, 5, 9, 11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

Art Unit: 2154

which applicant regards as the invention. Specifically, lines 3-5 of the claims recite, “whether or not it uses a base time name using a base time and an offset from the base time.” First, it is not clear if the “whether or not” applies to using a base time and an offset from the base time (e.g. does the determining step or the base time name use the base time and the offset?). Second, although the claims recite “whether or not it uses a base time name,” a base time name is clearly required in following limitations. Therefore, the limitation acts only to confuse the actual claimed subject matter. For the purpose of applying prior art, the Examiner interprets that the use of a base time and an offset from the base time is not required by the claims, unless the claims require them in subsequent limitations.

8. Claim 2 is further rejected under 35 U.S.C. 112, second paragraph, because the limitation “changing a planned start time of a schedule is determined” is grammatically incorrect in context of the passage and therefore renders the claim indefinite. The Examiner interprets that the planned start time is changed when it is determined that the base time is changed.
9. **Claims 3, 4, 6-7, 10 and 12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, lines 3-5 of the claims recite, “whether or not it uses a base time name using an end time of a second schedule, and an offset from the end time.” First, it is not clear if the “whether or not” applies to using an end time and an offset from the end time (e.g. does the determining step or the base time name use the base time and the offset?). Second, although the claims recite “whether or not it uses a base time name,” a base time

Art Unit: 2154

name is clearly required in following limitations. Therefore, the limitation acts only to confuse the actual claimed subject matter. For the purpose of applying prior art, the Examiner interprets that the use of an end time and an offset from the end time is not required by the claims, unless the claims require them in subsequent limitations.

10. **Claim 14** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is not clear what the step of updating the second schedule comprises nor how it can be updated when it has not been previously set. It appears that necessary preceding steps (e.g. setting the planned start time of the second schedule) have been left out of the claim.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. **Claims 1, 5, 13 and 14** are rejected under 35 U.S.C. 102(b) as being anticipated by Rischar et al. (US 5,636,124) (hereinafter Rischar).
13. As for claims 1, 5 and 13, Rischar discloses a schedule execution managing apparatus and method for managing execution of one or more schedules, the apparatus comprising:

Art Unit: 2154

a planned start time setting unit setting a planned start time of a schedule which is to be determined whether or not it uses a base time name using a base time and an offset from the base time (processor 62, Fig. 2);

a planned start time storing unit storing the set planned start time (alarm register 78, Fig. 3; col. 6, lines 3-15); and

a schedule execution controlling unit controlling an execution start of the schedule by referencing contents stored in said planned start time storing unit, wherein the base time having a base time name and said schedule execution managing apparatus managing execution of one or more schedules using one or more base time names (decision block 202, Fig. 7; Figs. 5, 6; col. 10, lines 7-28).

14. As for claim 14, Palencia discloses a schedule execution managing method managing execution of two or more schedules, comprising:

setting a planned start time of a first schedule, responsive to a base time name, using a base time and an offset from the base time (col. 6, lines 3-15; Figs. 5 and 6);

storing the set planned start time (col. 6, lines 3-15);

updating a related second schedule responsive to the base time name (col. 8, lines 35-54; Fig. 5); and

controlling an execution start of the first schedule by referencing the stored planned start time and controlling execution of the first schedule by referencing the stored planned start time and controlling execution of the second schedule responsive to the updating (col. 8, lines 35-54; col. 10, lines 7-28; Figs. 5 and 6).

15. **Claims 3 and 7** are rejected under 35 U.S.C. 102(b) as being anticipated by Palencia et al (Palencia, J.C.; Gonzalez Harbour M., "Schedulability analysis for tasks

Art Unit: 2154

with static and dynamic offsets,” Real-Time Systems Symposium, 1998.

Proceedings., The 19th IEEE , 2-4 Dec. 1998 , pgs. 26 -37.) (hereinafter Palencia).

Palencia discloses a scheduler operating in either a single processor environment or in a multiprocessor and distributed environment (Section 4, “In a multiprocessor and distributed system...worst-case analysis.”). The Examiner notes that a processor (fig. 3) inherently includes a storage unit for storing data and algorithms.

Furthermore, a control unit is inherent to the processor. In addition, a processor inherently includes a setting unit, for setting or changing values stored in the storage unit.

16. As for claims 3 and 7, Palencia discloses:

a schedule execution managing apparatus and method for managing execution of one or more schedules, the apparatus comprising:

a planned start time setting unit (setting unit, inherent to processor) setting a planned start time of a first schedule which is to be determined whether or not it uses a base time name using an end time of a second schedule, and an offset from the end time, wherein the first schedule having a dependency on the second schedule (Section 1, “Tindell developed in...than the task periods.”; Section 2, “The real-time system...that we will call a job.”);

a planned start time storing unit storing the set planned start time (storage unit, inherent to processor); and

a schedule execution controlling unit controlling an execution start of the schedule by referencing contents stored in said planned start time storing unit (control unit, inherent to processor).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. **Claims 2, 9 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rischar in view of George et al. (US 5,768,572) (hereinafter George).

19. **Examiner's Interpretation:** Because Rischar teaches programming the scheduling means to perform the desired tasks, where it is clear that the order or duration of these tasks could change for various processes (see col. 6, line 62 – col. 7, line 39), Rischar anticipates changing the planned start time of a schedule using the same programming means, as would be understood by one of ordinary skill in the art. Therefore Rischar teaches all the limitations of claims 2 and 11. However, because Rischar does not explicitly disclose changing the planned start time of a schedule, George is cited as additional support for the rejection as detailed below.

20. As for claims 2 and 11, Rischar teaches a schedule execution managing apparatus managing execution of one or more schedules, comprising:

a planned start time setting unit setting a planned start time of a schedule which is to be determined whether or not it uses a base time name using a base time and an offset from the base time (processor 62, Fig. 2);

a planned start time storing unit storing the set planned start time (alarm register 78, Fig. 3; col. 6, lines 3-15); and

Art Unit: 2154

a schedule executing controlling unit controlling execution start of the schedule by referencing contents stored in said planned start time storing unit, wherein the base time having a base time name and said schedule execution managing apparatus managing execution of one or more schedules using one or more base time names (decision block 202, Fig. 7; Figs. 5, 6; col. 10, lines 7-28); and

a planned start time changing unit changing a planned start time of a schedule is determined that the schedule which uses a base time name using the changed base time and the offset, when the base time is changed, and rewriting the planned start time stored in said planned start time storing unit (col. 6, line 62 – col. 7).

Even assuming without admitting that Rischar fails to teach changing the planned start time of a schedule, George teaches changing the planned start time of a schedule (col. 6, lines 8-46). George further teaches that the timers may be set, cancelled or reset prior to expiring (col. 1, line 57 – col. 2, line 14). In particular *resetting* of the timers is interpreted by the Examiner to be changing a base time (here, the “base time” is the time stored in the timer). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rischar by changing the planned start time of a schedule in order to respond to an equipment or communications failure, as taught by George (cols. 1-2, “The introduction of the HPR...the next periodic acknowledgement.”).

21. As for claim 9, Rischar teaches a computer readable storage medium on which is recorded a program for causing a computer to execute a process for managing execution of one or more schedules, the process comprising:

Art Unit: 2154

setting a planned start time of a schedule which is to be determined whether or not it uses a base time name using a base time and an offset from the base time (col. 6, lines 3-15; Figs. 5 and 6);

storing the set planned start time (alarm register 78, Fig. 3; col. 6, lines 3-15);
controlling an execution start of the schedule by referencing the stored planned start time, wherein the base time having a base time name and said process for managing execution of one or more schedules using one or more base time names (Figs. 5, 6 and 7; col. 10, lines 7-28);

resetting a planned start time of a schedule which is determined that it uses a base time name using the changed base time and the offset, when the base time is changed (col. 6, line 62 – col. 7, line 8);

storing the reset planned start time (col. 6, lines 3-15; col. 6, line 62 – col. 7, line 8); and

controlling an execution start of the schedule by referencing the stored planned start time, so that event schedules are changed only when the planned start time requires changes (col. 6, lines 3-15; col. 6, line 62 – col. 7, line 8).

Even assuming without admitting that Rischar fails to teach resetting the planned start time of a schedule, George teaches resetting the planned start time of a schedule (col. 6, lines 8-46). George further teaches that the timers may be set, cancelled or reset prior to expiring (col. 1, line 57 – col. 2, line 14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rischar by resetting the planned start time of a schedule in order to respond to an equipment or

Art Unit: 2154

communications failure, as taught by George (cols. 1-2, "The introduction of the HPR...the next periodic acknowledgement.").

22. **Claims 4, 6, 8, 10 and 12** are rejected under 35 U.S.C. 103(a) as being obvious over Palencia in view of George.

As for claims 4 and 12, the claims are rejected for the same reasons as claim 3 above. However, Palencia does not specifically disclose changing a planned start time of a first schedule based on a changed end time of a second schedule. George, on the other hand, discloses a schedule execution managing apparatus similar to that of claim 3, further comprising:

a planned start time changing unit (inherent to processor) changing the planned start time of the first schedule having the dependency on the second schedule using the changed end time and the offset, when the end time of the second schedule is changed, and rewriting the planned start time stored in said planned start time storing unit (col. 8, "The flow diagram...the timing wheel slot expired.").

It would have been obvious to one of ordinary skill in the art to modify the teaching of Palencia by changing the planned start time of a first schedule based on a changed end time of a second schedule in order to reset a timer for a task, such as retransmission of data, as taught by George (cols. 1-2, "The introduction of the HPR...the next periodic acknowledgement."). See also response to arguments, above.

23. As for claims 6, 8 and 10, the claims are rejected for the same reasons as claim 7 above. However, Palencia does not specifically disclose resetting a planned start time of a schedule using a changed base time nor storing the reset planned start time.

Art Unit: 2154

George, on the other hand, discloses a schedule execution manager method similar to that of claim 7, further comprising:

- resetting the planned start time of the first schedule having the dependency on the second schedule using the end time after change and the offset from the end time, when the end time of the second schedule is changed (col. 8, "The flow diagram...the timing wheel slot expired.");

- storing the reset planned start time (col. 8, "The flow diagram...the timing wheel slot expired."); and

- controlling an execution start of the first schedule by referencing the stored planned start time (col. 8, "The flow diagram...the timing wheel slot expired.").

It would have been obvious to one of ordinary skill in the art to modify the teaching of Palencia by resetting a planned start time of a first schedule using a changed end time of a second schedule in order to reset a timer for a task, such as retransmission of data, as taught by George (cols. 1-2, "The introduction of the HPR...the next periodic acknowledgement."). See also response to arguments, above.

Response to Arguments

24. Applicant's arguments with respect to claims 1, 2, 5, 6, 9 and 11, rejected over the Tindell reference, have been considered but are moot in view of the new ground(s) of rejection.
25. The only specific argument found by the Examiner with respect to the rejection of claims 3, 7, 10 and 12 as anticipated under 35 U.S.C. 102(b) by Palencia occurs in the 2nd full paragraph of pg. 9 of the Remarks. Specifically, Applicant asserts that

Art Unit: 2154


Palencia does not teach or suggest using the base time name to determine the necessity of changing each of the schedules. The Examiner finds that this limitation is not in claims 3 nor 7, which are presently rejected by Palencia (nor does it appear to be supported by the disclosure). Therefore, the argument is moot and the claims are properly rejected.

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C Perez-Daple whose telephone number is (703) 305-4897. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 9/7/04
Aaron Perez-Daple

